IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)
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Gutta et al.	)
	)
Serial No.: 10/014,195	) Group Art Unit: 3622
	)
Filed: November 13, 2001	) Examiner: Raquel Alvarez
	)
For: METHOD AND APPARATUS FOR	) **Board of Patent Appeals and**
RECOMMENDING ITEMS OF	) **Interferences**
INTEREST BASED ON	)
STEREOTYPE PREFERENCES OF	)
THIRD PARTIES	)
	)
Confirmation No.: 3005	)

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

In support of the Notice of Appeal, and pursuant to 37 C.F.R. § 41.37, Appellants present this appeal brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-9, 18, and 20-24 in the Final Office Action dated May 01, 2007. The appealed claims are set forth in the attached Claims Appendix.

1.   Real Party in Interest

This application is assigned to Koninklijke Philips Electronics N.V., the real party

in interest.

2.   Related Appeals and Interferences

There are no other appeals or interferences that would directly affect, be directly

affected, or have a bearing on the instant appeal.

3.   Status of the Claims

Claims 1-9, 18, and 20-24 have been rejected in the Final Office Action. The

final rejection of claims 1-9, 18, and 20-24 is being appealed. Claims 10-17, 19 and 25-31 have

been withdrawn

4.   Status of Amendments

All amendments submitted by Appellants have been entered.

5.   Summary of Claimed Subject Matter

The claimed invention, as recited in independent claim 1, is directed to a method

for setting-up a user profile indicating preferences of a user, and executing operations in a data

processing device. The device partitions third-party selection history. The device indicates

items that are selected by at least one third-party and clusters said items based on typical patterns

of items selected by third-party users. The clusters have a distance measure closer to the mean of

said cluster than to the mean of any of the remaining clusters. The device sets up the user profile

with items from at least one of selected cluster of item. (See Specification, p. 7, ll. 13 - 16, p. 8,

ll. 16 - 26; Fig. 1).

The claimed invention, as recited in independent claim 18, is directed to a system

for setting-up a user profile indicating preferences of a user comprising a memory for storing

computer readable code and a processor operatively coupled to said memory. The processor is

configured to partition third-party selection history indicating items that are selected by at least

one third-party. The selection history is partitioned into clusters based on typical patterns of items selected by representative third-party users. The clusters have a distance measure closer to the mean of said cluster than to the mean of any of the remaining clusters. The system receives a selection from said user of at least one of said clusters and sets up the user profile with items from at least one selected cluster. (See Specification, p. 7, ll. 13 - 16, p. 8, ll. 16 - 26; Fig. 1).

The claimed invention, as recited in independent claim 20, is directed to an article of manufacture for updating user profile comprising a computer readable medium. The computer readable medium contains a readable code means for executing a step to partition third-party history, a step to receive a selection, and a step to set-up the user profile. The third-party partitioning selection history step indicates items that are selected by at least one third-party, and organizes them into clusters. The clusters are determined by typical patterns of items selected by representative third-party users. The item is similar wherein the clusters have a distance measure closer to the mean of said cluster than to the mean of any of the remaining clusters. The receiving step receives a selection from said user of at least one of said clusters. The set-up step sets up a user profile with items from at least one selected cluster. (See Specification, p. 7, ll. 13 - 16, p. 8, ll. 16 - 26; Fig. 1).

The claimed invention, as recited in independent claim 21, is directed to an article of manufacture recommending one or more available items comprising a computer readable medium. The computer readable medium contains a readable code means for executing a step to provide clustered third-party selection history, a step to receive a selection, and a step to recommend items. The step to provide a clustered third party selection history indicates similar items that are selected by at least one third-party. Each of the clusters includes similar items; the clusters being such that items in one cluster are closer to the mean of that cluster than to the mean of any other cluster. The step to receive a selection receives a selection of said user of at least one of said clusters. The step to recommend recommends items based on said selected clusters. (See Specification, p. 7, ll. 13 - 16, p. 8, ll. 16 - 26; Fig. 1).

6.   Grounds of Rejection to be Reviewed on Appeal

I.   Whether claims 1-4, 6, 7-9, 18, 20, and 21 are unpatentable under 35 U.S.C. § 102(e) over U.S. Pat. No. 6,266,649 to Linden et al. (hereinafter "Linden")

II.   Whether claims 5, and 22-24 are unpatentable under 35 U.S.C. § 103(a) over Linden.

7.   Argument

I.   The Rejection of Claims 1-4, 6, 7-9, 18, 20, and 21 Under 35 U.S.C. § 102(e) Over Linden Should Be Reversed.

A.   The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 1-4, 6, 7-9, 18, 20, and 21 under 35 U.S.C. § 102(e) as being unpatentable over Linden. (See 05/01/07 Office Action, p. 2).

Linden is directed to a recommendation service that recommends items to users based on previous selections of said user. The service is designed to recommend products to a user from a merchant's website. To generate recommendations for the user, the service retrieves items from a table that are similar to items that are of interest to said user. The similar items are combined into one list and sorted to generate the list of recommended items. The service can use either previous purchase history of said user or the user can create multiple shopping carts. The service will recommend similar items based on either of these embodiments. In both embodiments, the system requires some previous history of the user to generate the list of recommended items. (See Linden, Abstract).

B.   The Cited Patent Does Not Disclose Items In A Respective One Of Said Clusters Having A Distance Measure Closer To A Mean Of Said Cluster Than To A Mean Of Remaining Ones Of Said Cluster, As Recited In Claim 1.

The Examiner asserts that "wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster," as recited in claim 1, is disclosed in Linden figure 5. (See 05/01/07 Office Action, p. 2-3). Appellants respectfully disagree. Appellants respectfully submit that nowhere in Figure 5 is there mention of an item whose distance measure is closer to the mean of one cluster than to the mean of any other clusters.

Figure 5 from Linden illustrates a sequence of steps performed by the recommendation service. (See Linden, col.14, ll. 34-36; Fig. 5). To generate a list of instant recommendations the system first identifies all popular items purchased or rated by the user within the last six months. The system then retrieves similar items lists from a table. The items lists are weighted based on the user's purchase date or corresponding rating. Similar items lists are merged while summing the scores, and then sorted from highest to lowest. The list is filtered based on items already purchased by the user or items rated negatively by the user. Finally the system optionally selects items from the user's recent shopping cart and inserts it into the list, and then provides the recommendation list to the user. (See Linden, Fig. 5). According to Figure 5, the only mathematical function performed by the system is the summing of scores in the merged similar items lists.

In Linden, there is a formula that is used to determine the corresponding value of other items in relation to items on the user's list. Depending on the value, the service will or will not recommend a particular item. To determine the corresponding item value a function CI is used. CI is a function of item P and item X, such that $CI(item\_P, item\_X) = (Common\ customers\ of\ item\_P\ and\ item\_X)/sqrt(item\_P \times item\_X)$. This formula uses the number of customers who purchased both items and correlates it to the total number of customers who purchased item_P and item_X. Depending on the corresponding item value, the service will or will not recommend the item to the user. This system does not have a pre-generated list of recommendations for the user. The goal of this CI function is to compare the items of interest to a particular user to all other items available for purchase and make a recommendation based on the computed CI value. (See Linden, col.13, ll. 13-30; Fig. 4)

In contrast, in the system of the claimed invention, an item belongs to a cluster if a distance measure of the item is closer to a mean of that cluster than to the mean of any other cluster. The claimed invention calculates the distance measure of a particular item. It then compares that distance measure to the mean of all clusters. Finally, the item is placed in the cluster in which that cluster has a mean that is closest to the distance measure of the item. This ensures the accuracy of each cluster. Linden, unlike the claimed invention, does not place items into clusters. Since there are no clusters in the system from Linden, no mean is calculated as a comparison for the clusters. When the system in Linden does a comparison for an item, it does not calculate the distance measure of the item to a cluster. Linden, at the time the recommendation is requested, does a comparison using its CI function to determine recommendations for the user. Depending on the CI value, a particular item may or may not be recommended. In the claimed invention, the distance measure and the mean are calculated only to determine which cluster the item belongs to. The mean calculation is a completely different formula than the CI function presented in Linden. As such, any calculation using the distance measure and the mean would produce different results from a calculation using the CI function from Linden.

Thus, it is respectfully submitted that the recitation of "wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster," as recited in claim 1, is not disclosed or suggested by Linden. Accordingly, Appellants respectfully request the Board overturn the Examiner's rejection of claim 1. Because claims 2-9 and 22 depend from and, therefore, include all the limitations of claim 1, it is respectfully submitted that these claims are allowable for at least the reasons stated above.

The Examiner rejected claims 18, 20, and 21 for the same reasons as the rejection of claim 1 over Linden. (See 05/01/07 Office Action). Applicants respectfully submit that claims 18, 20, and 21 are allowable for at least the reasons discussed above with regard to claim 1.

II.   The Rejection of Claims 5, and 22-24 Under 35 U.S.C. § 103(a) Over Linden Should Be Reversed.

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A.   The Examiner's Rejection

In the Final Office Action, the Examiner rejected claims 5, and 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Linden. (See 05/01/07 Office Action, p. 3).

See IA Above.

B.   The Cited Patent Does Not Disclose Wherein Items In A Respective One Of Said Clusters Has A Distance Measure Closer To A Mean Of Said Cluster Than To A Mean Of Remaining Ones Of Said Cluster, As Recited In Claim 1.

For the reasons stated in I. B. Linden does not disclose or suggest "wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster," as recited in claim 1. Because claims 5 and 22 depend on, and therefore include all of, the limitations of claim 1 it is respectfully submitted that these claims are also allowable.

The Examiner rejected claim 18 for the same reasons as the rejection of claim 1 over Linden. (See 05/01/07 Office Action p. 2). Applicants respectfully submit that claim 18 is allowable for at least the reasons discussed above with regard to claim 1. As claim 23 depends from, and therefore includes all the limitations of claim 18, it is hereby submitted that this claim is also allowable.

The Examiner rejected claim 20 for the same reasons as the rejection of claim 1 over Linden. (See 05/01/07 Office Action). Applicants respectfully submit that claim 20 is allowable for at least the reasons discussed above with regard to claim 1. As claim 24 depends from, and therefore includes all the limitations of claim 20, it is hereby submitted that this claim is also allowable.

8.   <u>Conclusion</u>

For the reasons set forth above, Appellants respectfully request that the Board reverse the rejection of the claims by the Examiner under 35 U.S.C. § 103(a), and indicate that claims 1-14 are allowable.
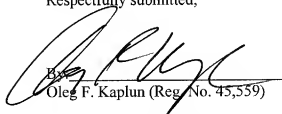
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CLAIMS APPENDIX

1.   (Previously Presented) A method for setting-up a user profile indicating preferences of a user, comprising executing the following operations in a data processing device:

partitioning third party selection history, indicating items that are selected by at least one third party, into clusters of items, said clusters being determined based on typical patterns of items selected by representative third-party users, said items being similar, wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster than to a mean of remaining ones of said clusters;

setting up said user profile with items from at least one selected cluster of items.

2.   (Previously Presented) The method of Claim 1, further comprising recommending items based on said user profile.

3.   (Previously Presented) The method of Claim 1, further comprising assigning a label to each of said clusters.

4.   (Previously Presented) The method of Claim 3, wherein said users selects said at least one cluster based on said assigned labels.

5.   (Previously Presented) The method of Claim 1, wherein said partitioning further comprises employing a k-means clustering routine.

6.   (Original) The method of Claim 1, wherein said user profile indicates viewing preferences of said user.

7.   (Original) The method of Claim 1, wherein said items are programs.

8.   (Original) The method of Claim 1, wherein said items are content.

9.   (Original) The method of Claim 1, wherein said items are products.

18.   (Previously Presented) A system for setting-up a user profile indicating preferences of a user, comprising:

     a memory for storing computer readable code; and

     a processor operatively coupled to said memory, said processor configured to:

        partition third party selection history, indicating items that are selected by at least one third party, into clusters of items, said clusters being determined based on typical patterns of items selected by representative third-party users, said items being similar wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster than to a mean of remaining ones of said clusters;

        receive a selection from said user of at least one of said clusters; and

        setting up ate said user profile with items from said at least one selected cluster.

20.   (Previously Presented) An article of manufacture for updating a user profile indicating preferences of a user, comprising:

     a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

     a step to partition third party selection history, indicating items that are selected by at least one third party, into clusters of items, said clusters being determined based on typical patterns of items selected by representative third-party users, said items being similar wherein items in a respective one of said clusters has a distance measure closer to a mean of said cluster than to a mean of remaining ones of said clusters;

     a step to receive a selection from said user of at least one of said clusters; and

     a step to set-up said user profile with items from said at least one selected cluster.

21.   (Previously Presented) An article of manufacture recommending one or more available items to a user, comprising:

     a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

     a step to provide a clustered third party selection history to a user, said selection history

indicating similar items that are selected by at least one third party, each of said clusters including similar items, the clusters being such that points items in one cluster are closer to the mean of that cluster than to the mean of any other cluster;

    a step to receive a selection from said user of at least one of said clusters; and

    a step to recommend items based on said selected clusters.

22.   (Previously Presented) The method of claim 1, comprising weighting items from the user's own selection history more heavily than items from the third party selection history.

23.   (Previously Presented) The system of claim 18, comprising weighting items from the user's own selection history more heavily than items from the third party selection history.

24.   (Previously Presented) The article of manufacture of claim 20, comprising weighting items from the user's own selection history more heavily than items from the third party selection history.

EVIDENCE APPENDIX

No evidence has been entered or relied upon in the present appeal.

RELATED PROCEEDING APPENDIX

No decisions have been rendered regarding the present appeal or any proceedings related thereto.